

LSI DOCKET NO. 01-645

CLAIMS:

What is claimed is:

1. A method of managing power in a device, comprising:
 5 measuring a temperature in a device;
 comparing the temperature to a first threshold; and
 decreasing the throughput of the device if the temperature exceeds the first threshold.
2. The method of claim 1, wherein the step of decreasing the throughput of the device
 10 comprises decreasing a clock frequency for at least one processor in the device.
3. The method of claim 1, wherein the step of decreasing the throughput of the device
 comprises setting a limit to a number of requests to be processed in a given time period.
4. A method of managing power in a data transfer device, comprising:
 in response to a predetermined event, measuring a temperature in a data transfer device,
 comparing the temperature to at least a first temperature range, and setting a request limit to a
 first predetermined value if the temperature is within the first temperature range;
 in response to a data transfer request, determining whether the request limit has been
 20 reached, and processing the data transfer request if the request limit has not been reached.
5. The method of claim 4, wherein the first temperature range is below a first threshold and
 the first predetermined value is a predetermined maximum value.
6. The method of claim 4, wherein the first temperature range is between a first threshold
 25 and a second threshold.

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7. The method of claim 6, further comprising:
in response to the predetermined event, comparing the temperature to a second
temperature range if the temperature is not within the first temperature range, and setting the
request limit to a second predetermined value if the temperature is within the second temperature
range.

8. The method of claim 7, wherein the second predetermined value is less than the first
predetermined value.

9. The method of claim 8, wherein the second predetermined value is zero.

10. The method of claim 4, wherein the first predetermined value is zero.

11. The method of claim 4, further comprising:
in response to the data transfer request, decrementing the request limit if the request limit
has not been reached.

12. The method of claim 4, wherein the data transfer device is an embedded input/output
controller.

13. The method of claim 12, wherein the method is performed by a control processor.

14. The method of claim 13, wherein the step of processing the data transfer request
comprises assigning the data transfer request to a lower level processor.

15. The method of claim 4, wherein the predetermined event is a timer interrupt.

16. A data transfer device, comprising:
a temperature sensor; and

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a control processor, coupled to the temperature sensor,

wherein the control processor, in response to a predetermined event, measures a temperature using the temperature sensor, compares the temperature to at least a first temperature range, and sets a request limit to a first predetermined value if the temperature is within the first temperature range; and

wherein the control processor, in response to a data transfer request, determines whether the request limit has been reached, and processes the data transfer request if the request limit has not been reached.

17. The data transfer device of claim 16, wherein the first temperature range is below a first threshold and the first predetermined value is a predetermined maximum value.

18. The data transfer device of claim 16, wherein the first temperature range is between a first threshold and a second threshold.

19. The data transfer device of claim 18, wherein the control processor, in response to the predetermined event, compares the temperature to a second temperature range if the temperature is not within the first temperature range, and sets the request limit to a second predetermined value if the temperature is within the second temperature range.

20. The data transfer device of claim 19, wherein the second predetermined value is less than the first predetermined value.

21. The data transfer device of claim 20, wherein the second predetermined value is zero.

22. The data transfer device of claim 16, wherein the first predetermined value is zero.

23. The data transfer device of claim 16, wherein the control processor, in response to the data transfer request, decrements the request limit if the request limit has not been reached.

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24. The data transfer device of claim 16, wherein the data transfer device is an embedded input/output controller.

5 25. The data transfer device of claim 24, wherein the control processor assigns the data transfer request to a lower level processor.

26. The data transfer device of claim 16, wherein the predetermined event is a timer interrupt.

10 27. A computer program product, in a computer readable medium, for managing power in a data transfer device, comprising:

instructions, in response to a predetermined event, for measuring a temperature in a data transfer device, comparing the temperature to at least a first temperature range, and setting a request limit to a first predetermined value if the temperature is within the first temperature range;

15 instructions, in response to a data transfer request, for determining whether the request limit has been reached, and processing the data transfer request if the request limit has not been reached.